

Technical Data Sheet

BV421 Mouse Anti-Human CD48

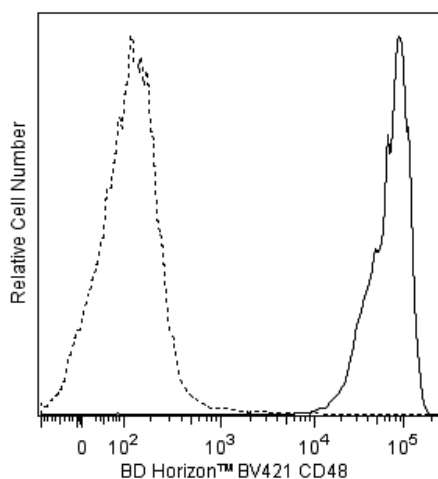
Product Information

Material Number:	562718
Alternate Name:	BCM1; BLAST; BLAST1; Hulym3; MEM-102; OX45; SLAMF2; TCT.1
Size:	100 tests
Vol. per Test:	5 µl
Clone:	TÜ145
Isotype:	Mouse IgM, κ
Reactivity:	QC Testing: Human
Workshop:	IV N68
Storage Buffer:	Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

Description

The TÜ145 monoclonal antibody specifically binds to CD48. CD48 belongs to the CD2 family within the immunoglobulin superfamily. CD48 is a ~43 kDa glycosylphosphatidylinositol (GPI)-anchored single chain glycoprotein. CD48 is strongly expressed on lymphocytes, monocytes and macrophages and weakly on granulocytes. The expression of CD48 is upregulated following lymphocyte activation and by Epstein-Barr virus (EBV) infection. CD48 binds with high affinity to CD244 and with low affinity to CD2. These receptor-ligand interactions can augment or inhibit leukocyte responses.

The antibody was conjugated to BD Horizon™ BV421 which is part of the BD Horizon™ Brilliant Violet™ family of dyes. With an Ex Max of 407-nm and Em Max at 421-nm, BD Horizon™ BV421 can be excited by the violet laser and detected in the standard Pacific Blue™ filter set (eg, 450/50-nm filter). BD Horizon™ BV421 conjugates are very bright, often exhibiting a 10 fold improvement in brightness compared to Pacific Blue™ conjugates.



Flow cytometric analysis of CD48 expression on human peripheral blood lymphocytes. Whole blood was stained with BD Horizon™ BV421 Mouse Anti-Human CD48 antibody (Cat. No. 562718; solid line histogram) or with a BD Horizon™ BV421 Mouse IgM, κ Isotype Control (Cat. No. 562704; dashed line histogram). The erythrocytes were lysed with BD Pharm Lyse™ Lysing Buffer (Cat. No. 555899). The fluorescence histograms were derived from events with the forward and side light-scatter characteristics of viable lymphocytes. Flow cytometry was performed using a BD™ LSR II Flow Cytometer System.

Preparation and Storage

Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

The antibody was conjugated with BD Horizon™ BV421 under optimum conditions, and unconjugated antibody and free BD Horizon™ BV421 were removed.

Application Notes

Application

Flow cytometry	Routinely Tested
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Suggested Companion Products

Catalog Number	Name	Size	Clone
562704	BV421 Mouse IgM, κ Isotype Control	50 µg	G155-228
554656	Stain Buffer (FBS)	500 ml	(none)
555899	Lysing Buffer	100 ml	(none)

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Product Notices

1. This reagent has been pre-diluted for use at the recommended Volume per Test. We typically use 1×10^6 cells in a 100- μ l experimental sample (a test).
2. An isotype control should be used at the same concentration as the antibody of interest.
3. Brilliant Violet™ 421 is a trademark of Sirigen.
4. Pacific Blue™ is a trademark of Molecular Probes, Inc., Eugene, OR.
5. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
6. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
7. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
8. Please refer to www.bdbiosciences.com/pharming/protocols for technical protocols.

References

- Elishmereni M, Levi-Schaffer F. CD48: A co-stimulatory receptor of immunity. *Int J Biochem Cell Biol.* 2011; 43(1):25-28. (Biology)
- Knapp W, Dörken B, Gilks WR, et al, ed. *Leucocyte Typing IV.* New York, NY: Oxford University Press; 1989:1-1182. (Clone-specific)
- Nedvetzki S, Sowinski S, Eagle RA, et al. Reciprocal regulation of human natural killer cells and macrophages associated with distinct immune synapses. *Blood.* 2007; 109(9):3776-3785. (Clone-specific: Flow cytometry, Inhibition)
- Sandrin MS, Mouhtouris E, Vaughan HA, Warren HS, Parish CR. CD48 is a low affinity ligand for human CD2. *J Immunol.* 1993; 151(9):4606-4613. (Biology)

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